Paper No. 29

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KUNIO FUKUDA

Appeal No. 1998-0219
Application No. 08/265,000

ON BRIEF

Before HAIRSTON, KRASS, and BARRY, Administrative Patent Judges.
BARRY, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the rejection of claims 4 and 9. We reverse.

BACKGROUND

The invention at issue in this appeal relates to cordless telephone systems. Specifically, a cordless telephone system comprises a master station, sub-master stations, and remote stations. The master station periodically transmits a master control signal, which has a leading edge and trailing edge. A

predefined time after receiving the master control signal, each sub-master station transmits a sub-master control signal, which also has a leading edge and trailing edge. Together, the master control and the sub-master control signals define a transmission interval. More specifically, the transmission interval extends from the leading edge of the master control signal to the trailing edge of the last sub-master control signal.

After determining the periodicity of the transmission interval, each remote station de-energizes its receiver between transmission intervals. Such de-energizing reduces the power consumed by each remote station, thereby extending the life of its battery. During transmission intervals, conversely, each remote station energizes its receiver so that the master and sub-master control signals can be received.

Claim 9, which is representative for our purposes, follows:

9. A digital cordless telephone apparatus comprising:

a master station that periodically transmits a master control signal over a channel, the master control signal having a leading edge and a trailing edge;

a plurality of sub-master stations, each sub-master station transmitting a sub-master control signal in response to each received master control signal a predefined time after receiving the trailing edge of each master control signal so that none of the sub-master control signals are output at the same time, each sub-master control signal having a leading edge and a trailing edge, a transmission interval being defined from the leading edge of one of the master control signals to the trailing edge of the sub-master control signal that is last to be transmitted in response to said one of the master control signals; and

a plurality of remote stations, each remote station receiving the master and sub-master control signals, determining the periodicity of the transmission interval, de-energizing a reception unit after the periodicity of the transmission interval has been determined, and energizing the reception unit only during every n transmission intervals to receive the master and sub-master control signals over the channel, where n is an integer.

The references relied on in rejecting the claims follow:

Natarajan et al. (Natarajan) 5,241,542 Aug. 31, 1993
(filed Aug. 23, 1991)

Mock et al. (Mock) 5,382,949 Jan. 17, 1995
(filed Feb. 1, 1993)

Schuermann 5,455,575 Oct. 3, 1995
(filed Sept. 23, 1994).

Claims 4 and 9 stand rejected under 35 U.S.C. § 103 as being unpatentable over Schuermann in view of Natarajan or Mock. (Paper No. 16 at 4.) Rather than repeat the arguments of the appellant or examiner in toto, we refer the reader to the briefs and answers for the respective details thereof.

OPINION

In reaching our decision in this appeal, we considered the subject matter on appeal and the rejection advanced by the examiner. Furthermore, we duly considered the arguments and evidence of the appellant and examiner. After considering the totality of the record, we are persuaded that the examiner erred in rejecting claims 4 and 9. Accordingly, we reverse.

We begin by noting the following principles from In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993).

> In rejecting claims under 35 U.S.C. Section 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).... "A prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." In re Bell, 991 F.2d 781, 782, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (quoting In re Rinehart, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)). If the examiner fails to establish a prima facie case, the rejection is improper and will be overturned. In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

With these in mind, we consider the appellant's argument and the examiner's reply.

The appellant argues, "since the Schuermann reference fails to teach or suggest sub-master stations that output signals such that 'none of the sub-master control signals are output at the same time', claims 4 and 9 are patentable over Schuermann in view of Natarajan or Mock." (Second Reply Br. at 3) The examiner replies, "Schuermann implicitly discloses

that the sub-master stations transmit a predetermined time after the master station, because time delays in communications due to air interface interference/propagation are well known in the art (Col. 7;12-16)." (Paper No. 21 at 4.) He explains, "even a microsecond delay, no matter how infinitesimal, would cause transmissions to happen at different times." (Id. at 6-7.) The examiner also alleges, "Schuermann discloses the use of CSMA protocols, which *prevent* all sub-masters from transmitting at the same time, because a collision would result and both sub-masters would transmit at a later time." (Id. a 7.)

"'[T]he main purpose of the examination, to which every application is subjected, is to try to make sure that what each claim defines is patentable. [T]he name of the game is the claim ....'" In re Hiniker Co., 150 F.3d 1362, 1369, 47 USPQ2d 1523, 1529 (Fed. Cir. 1998) (quoting Giles S. Rich, The Extent of the Protection and Interpretation of Claims -- American Perspectives, 21 Int'l Rev. Indus. Prop. & Copyright L. 497, 499, 501 (1990)). Here, claim 4 specifies in pertinent part the following limitations:

> transmitting a plurality of sub-master control signals from the sub-master stations to the remote stations in response to each master control signal a predefined time after the trailing edge of each master control signal is transmitted so that none of the sub-master control signals are output at the same time ....

Similarly, claim 9 specifies in pertinent part the following limitations:

> a plurality of sub-master stations, each sub-master station transmitting a sub-master control signal in response to each received master control signal a predefined time after receiving the trailing edge of each master control signal so that none of the sub-master control signals are output at the same time ....

Accordingly, claims 4 and 9 each require that none of a plurality of sub-master control signals is output at the same time. To accomplish this, each sub-master station must be allowed to start and complete its transmission without any other sub-master station beginning to transmit.

The examiner fails to show a suggestion of the limitations. "Obviousness may not be established using hindsight or in view of

the teachings or suggestions of the inventor." Para-Ordnance Mfg. v. SGS Importers Int'l, 73 F.3d 1085, 1087, 37 USPQ2d 1237, 1239 (Fed. Cir. 1995)(citing W.L. Gore & Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1551-53, 220 USPQ 303, 311-13 (Fed. Cir. 1983)). "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992) (citing In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984)). "It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious." Id. at 1266, 23 USPQ2d at 1784, (citing In re Gorman, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991)).

Here, Schuermann does teach a plurality of sub-master stations, each of which transmits a sub-master control signal in response to a received master control signal.

Specifically, the reference includes the following disclosure.

> If within a certain amount of time the first interrogation unit **10** did not receive a response from the addressed responder unit, the first interrogation unit **10** might request that the second interrogation unit **16** and/or additional interrogation units **16a** send a second or an additional RF interrogation signal addressed towards this specific responder unit. Should one or additional of these other interrogation units **16**, **16a** receive a response from the addressed responder unit, they might then relay this information back to first interrogation unit **10**. In this manner, a network of interrogation units might be used to detect as regards to the presence or to locate a set of objects containing responder units having known addresses.

Col. 9, ll. 17-26. Schuermann lacks a suggestion, however, that the second interrogation unit 16 and additional interrogation units 16a cannot send their second or additional RF interrogation signals, respectively, at the same time. In other words, there is no suggestion that each of the interrogation units be allowed to start and complete its transmission of an RF interrogation signal without any of the other units beginning to transmit.

We appreciate the examiner's observation that even a slight difference in the propagation delays seen by the second interrogation unit 16 and the additional interrogation units 16a could allow the units to begin their respective transmissions at different times. The examiner does not show, however, that beginning transmissions at different times ensures that each of the interrogation units would be allowed to complete its transmission without any of the other units beginning to transmit.

To the contrary, the carrier sense multiple access (CSMA) protocol, used by the interrogator units and referenced by the examiner, is subject to simultaneous transmissions. Specifically, "it may happen that two or more stations attempt to transmit at about the same time. If this happens, there will be a collision." William Stallings, Data and Computer Communications 303 (2d ed. 1988) (copy attached).[1] The

[1]The ALOHA protocol is also subject to simultaneous transmissions. See Stallings at 296 (copy attached)("The packet may be invalid ... because another station transmitted a frame at about the same time.")

examiner implies as much by recognizing that "a collision would result" in Schuermann. (Paper No. 21 at 7.) Each interrogation unit of the reference accounts for such a collision, moreover, by listening for an acknowledgment to ensure that its transmission was properly received and, if no such acknowledgment is received, resending the transmission. Col. 6, ll. 58-65.

The examiner fails to allege, let alone show, that Natarajan or Mock remedies the defects of Schuermann. Because the CSMA and ALOHA protocols used by Schuermann is subject to simultaneous transmissions, we are not persuaded that teachings from the prior art would appear to have suggested the claimed limitation of "none of the sub-master control signals are output at the same time ...." The examiner has impermissibly relied on the appellants' teachings or suggestions. He has not established a prima facie case of obviousness. Therefore, we reverse the rejection of claims 4 and 9 under 35 U.S.C. § 103(a).

CONCLUSION

In summary, the rejection of claim s 4 and 9 under 35 U.S.C. § 103(a) is reversed.

REVERSED

KENNETH W. HAIRSTON)

Administrative Patent Judge)	
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